

NATURAL RESOURCES CONSERVATION SERVICE

VIRGINIA CONSERVATION PRACTICE STANDARD

RIPARIAN HERBACEOUS COVER

(Acre)

Code 390

DEFINITION

An area of predominantly grass, forb and herbaceous vegetation located adjacent to and up-gradient from watercourses or water bodies.

PURPOSES

- Provide habitat (food, shelter, and water) for aquatic and terrestrial organisms.
- Intercept direct solar radiation and create shade to help maintain or restore suitable water temperatures for fish and other aquatic organisms while providing a milder microclimate for wildlife.
- Improve and protect water quality by reducing the amount of sediment, nutrients, and other pollutants, such as pesticides and organics in surface runoff.
- Reduce uptake of nutrients and chemicals in shallow groundwater flow.
- Provide food, in the form of plant detritus, for aquatic insects which are important food items for fish.
- Help stabilize the streambank.
- To function as corridors providing landscape linkages between existing habitats.
- Provide room for watercourses to establish geomorphic stability.
- To manage existing riparian herbaceous habitat to improve or maintain desired plant communities.

CONDITIONS WHERE PRACTICE APPLIES

In cropland or pasture, along perennial and intermittent streams or on the fringe of water bodies, wetlands, and active sinkholes, where the natural plant community is dominated by herbaceous vegetation.

Where the ecosystem has been altered and the potential natural plant community has changed or has been converted to cropland, pastureland, grazing land, etc.

Where tree planting is not in keeping with the landowner objectives or is not suitable, it should be noted that this practice does not offer as great an environmental benefit (i.e., stream shading, food, cover, filtering, etc.) as the Virginia Conservation Practice Standard *Riparian Forest Buffer* (Code 391).

On areas specified by local ordinance as adopted pursuant to the Chesapeake Bay Preservation Area designation and Management Regulation (9 VAC 10-20-10) effective November 15, 1990; or any other local or state ordinance or regulation (See Considerations and Practice Narratives for options.)

CRITERIA

GENERAL CRITERIA APPLICABLE TO ALL PURPOSES

The minimum required buffer width is 35 feet. Wider buffer widths will provide greater environmental benefits. Select native species that are adapted to site conditions and provide diversity, cover and

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.

food for wildlife. Species selected should also provide a deep, binding root mass to strengthen streambanks and improve soil health.

Existing natural vegetation can often be maintained and managed to provide adequate cover. If planting is necessary, native species are preferred and should be used over introduced species. If wildlife shrubs are planted (See Virginia Conservation Practice Standard *Tree/Shrub Establishment [Code 612]*) to create greater benefits or advanced natural succession takes place, additional care and maintenance may be necessary to prevent shading and decline of desired herbaceous species.

Protect and enhance riparian vegetation and water quality by proper management of that vegetation. Recommend reduced haying until the desired plant community is well established. A plan for limited haying will be designed to protect emerging vegetation, streambank stability, wildlife habitat, and will eliminate haying of riparian cover during critical periods for aquatic species and nesting birds.

Grazing is **NOT** allowed on any part of this riparian cover.

Harmful pests present on the site will be controlled or eliminated as necessary to achieve and maintain the intended purpose.

Management systems applied will be designed to maintain the vigor and reproduction of the desired plant community. Timing of haying will avoid periods when streambanks are saturated and vulnerable to mechanical damage.

The plant communities established and target successional stage will depend on wildlife needs, existing resources in the watershed, and local management objectives.

Necessary site preparation and planting shall be done at a time and manner to ensure survival and growth of selected species. Only viable, high quality and adapted planting stock will be used. Site preparation shall be sufficient for establishment and growth of selected species and be done in a manner that does not compromise the intended purpose. See the *Plant Establishment Guide for Virginia*.

The management plan shall consider habitat and wildlife objectives such as: habitat diversity,

habitat linkages, daily and seasonal habitat ranges, limiting factors, and native plant communities.

Riparian widths may be wider than the minimum depending on the requirements of wildlife species and associated environmental concerns.

Due to site specific features and topographic conditions, the effectiveness of these riparian buffers to trap and filter sediment and nutrients will vary greatly between sites. To maximize the effectiveness of these buffers, associated practices may be needed as part of this riparian buffer zone. These practices may include (but are not limited to):

342	<i>Critical Area Planting</i>
350	<i>Sediment Basin</i>
362	<i>Diversion</i>
382	<i>Fence</i>
386	<i>Field Border</i>
391	<i>Riparian Forest Buffer</i>
393	<i>Filter Strip</i>
410	<i>Grade Stabilization Structure</i>
412	<i>Grassed Waterway</i>
422	<i>Hedgerow Planting</i>
472	<i>Use Exclusion</i>
575	<i>Animal Trails and Walkways</i>
580	<i>Streambank and Shoreline Protection</i>
612	<i>Tree/Shrub Establishment</i>

ADDITIONAL CRITERIA TO PROTECT OR IMPROVE WATER QUALITY

Concentrated flow erosion or mass soil movement shall be controlled in the up-gradient area prior to establishment of the riparian herbaceous cover.

The native or natural plant community should be managed and maintained to optimize functions of the riparian zone, which control erosion and maintain water quality.

CONSIDERATIONS

Maintenance of the buffer is a major planning consideration. Haying, periodic burning, disking (portion), and mowing are all acceptable options. Simple mowing is the least desired as it does not remove accumulated vegetation. Landowner

objectives and equipment limitations must be considered in planning appropriate maintenance requirements.

Site hydrology must be considered. Plant species selected must be adapted to the duration of saturation and inundation of the site.

Channel and streambank stability must be considered in selecting this practice or determining that this practice may need to be combined with other practices that better address stability issues.

This practice can be combined with filter strips to improve water quality.

Considerations should be given to how this practice will provide riparian habitat and linkage to other habitats.

Target riparian buffer restoration on a watershed basis to address habitat fragmentation, connectivity, and provide corridors for wildlife by maintaining continuous streamside vegetation.

Establish alternative water sources or controlled access stream crossings to manage livestock access to the stream and riparian area.

Select plant species that are native and have multiple values such as those suited for biomass, nesting, aesthetics, and tolerance to locally used herbicides.

Avoid plant species which may be alternate hosts to undesirable pests. Species diversity should be considered to avoid loss of function due to species-specific pests.

The location, layout and density of the buffer should complement natural features.

Corridor configuration, species planted, and management should enhance habitats for threatened, endangered, and other species of concern, where applicable.

All maintenance operations will be completed outside of the wildlife nesting season for Virginia. No maintenance should be done between April 15 and August 15.

Certain state or local programs and ordinances, such as the Chesapeake Bay Preservation Act, require riparian buffers of various widths be

installed, or natural buffers be maintained, based on associated conservation management systems on the adjacent land area. These program requirements are addressed the Practice Narrative descriptions, and are for use **ONLY** with CBPA sites.

PLANS AND SPECIFICATIONS

Specifications for this practice shall be prepared for each site. Specification shall be recorded using approved specifications sheets, job sheets, narrative statements in the conservation plan, or other acceptable documentation. Specifications will include location, length, width, vegetative requirements and associated practices, i.e., fencing for all riparian herbaceous covers planned. Refer to the *Plant Establishment Guide for Virginia* for species, mixtures, and rates of seed and/or planting stock.

Operation and maintenance requirements will be incorporated into the site specifications and conservation plan.

OPERATION AND MAINTENANCE

The purpose of operation, maintenance, and management is to ensure that the practice functions as intended over time.

The riparian area will be inspected periodically and protected to maintain the intended purpose from adverse impacts such as excessive vehicular and pedestrian traffic, noxious weeds, pest infestations, pesticide use on adjacent lands, livestock damage, and fire.

As applicable, control of concentrated flow erosion or mass soil movement shall be continued in the up-gradient area to maintain riparian function.

Any use of fertilizers, pesticides and other chemicals to assure riparian area function shall not compromise the intended purpose of the buffer.

REFERENCES

1. National Engineering Handbook, Part 653, "Stream Corridor Restoration: Principles, Processes, and Practices", 1998.
2. Virginia NRCS Field Office Technical Guide, Sections I and IV.
3. Virginia Agricultural BMP Manual, DCR, March 1998.
4. *NRCS/RCA Issue Brief 13, Riparian Areas: Implication for Management.*
5. *Plant Establishment Guide for Virginia.*
6. Chesapeake Riparian Handbook, USDA-NA/TP-02-97, "Guide for Establishing and Maintaining Riparian Forest Buffers".

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Approved Practice Narratives

(Acre)

CODE 390

390 D1 Riparian Herbaceous Cover:
A herbaceous vegetative buffer with a minimum width of 35 feet will be established and maintained along the riparian zone. Attached specifications provide details for actual widths, seeding and other components necessary for establishment and maintenance of this practice.

390 D2 Riparian Herbaceous Cover:
An existing vegetative buffer with a minimum width of 35 feet will be maintained along the riparian zone. Attached specifications provide details for actual widths and maintenance requirements.

390 D3 Riparian Herbaceous Cover:
A vegetative buffer with a minimum width of 35 feet will be established and maintained between the agricultural fields and locally identified environmental feature as required by the Chesapeake Bay Preservation Act and local ordinance. (Must have an associated soil and water quality conservation plan implemented on adjacent agricultural land).

390 D4 Riparian Herbaceous Cover:
An existing vegetative buffer with a minimum of 35 feet will be maintained between the agricultural fields and locally identified environmental feature as required by the Chesapeake Bay Preservation Act and local ordinance. (Must have an associated soil and water quality conservation plan implemented on adjacent agricultural land.)

390 D5 Riparian Herbaceous Cover:
A vegetative buffer with a minimum width of 50 feet will be established and maintained between the agricultural fields and the locally identified environmental feature as required by the Chesapeake Bay Preservation Act and local ordinance. (Must have associated BMP's implemented on adjacent agricultural land.)

390 D6 Riparian Herbaceous Cover:
An existing vegetative buffer with a minimum width of 50 feet will be maintained between the agricultural fields and the locally identified environmental feature as required by the Chesapeake Bay Preservation Act and local ordinance. (Must have associated BMP's implemented on adjacent agricultural land.)

390 D7 Riparian Herbaceous Cover:
A vegetative buffer with a minimum width of 100 feet will be established and maintained between the agricultural fields and the locally identified environmental feature as required by the Chesapeake Bay Preservation Act and local ordinance.

390 D8 Riparian Herbaceous Cover:
An existing vegetative buffer with a minimum width of 100 feet will be maintained between the agricultural fields and the locally identified environmental feature as required by the Chesapeake Bay Preservation Act and local ordinance.

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